National Institute of Environmental Health Sciences

Tick-borne encephalitis virus, ticks and humans: Short-term and long-term dynamics

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Abstract:

PURPOSE OF REVIEW: Much public health concern and scientific interest has been kindled by significant increases in incidence of tick-borne encephalitis over the past 1-2 decades. It is the most important vector-borne disease of humans in Europe, for which excellent long-term data allow robust quantitative analyses. RECENT FINDINGS: Despite the increasing tendency to attribute all increases in vector-borne diseases to climate change, there is no convincing evidence that the appearance of new foci in Sweden, Switzerland, France and Germany during this century, or the upsurge in cases within well recognized endemic regions, is due to the recorded minor extensions of infectious ticks into higher altitudes and latitudes and into winter periods, in response to warmer conditions. Rather, there is now good evidence of greater human exposure to infected ticks through altered socioeconomic circumstances (in addition to higher densities of tick-feeding deer--not reviewed here), so far best quantified for Central and Eastern Europe. SUMMARY: Increased awareness of tick-borne encephalitis and understanding of the changing risk factors, including the role of human behaviour, will ensure better personal protection against infection, including vaccination and avoidance of high-risk activities.

Source: http://dx.doi.org/10.1097/QCO.0b013e32830ce74b

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Temperature

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Europe

Health Impact:

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Vectorborne Disease

Vectorborne Disease: Tick-borne Disease

Tick-borne Disease: Tick-borne Encephalitis

Resource Type:

format or standard characteristic of resource

Review

Timescale:

time period studied

Time Scale Unspecified